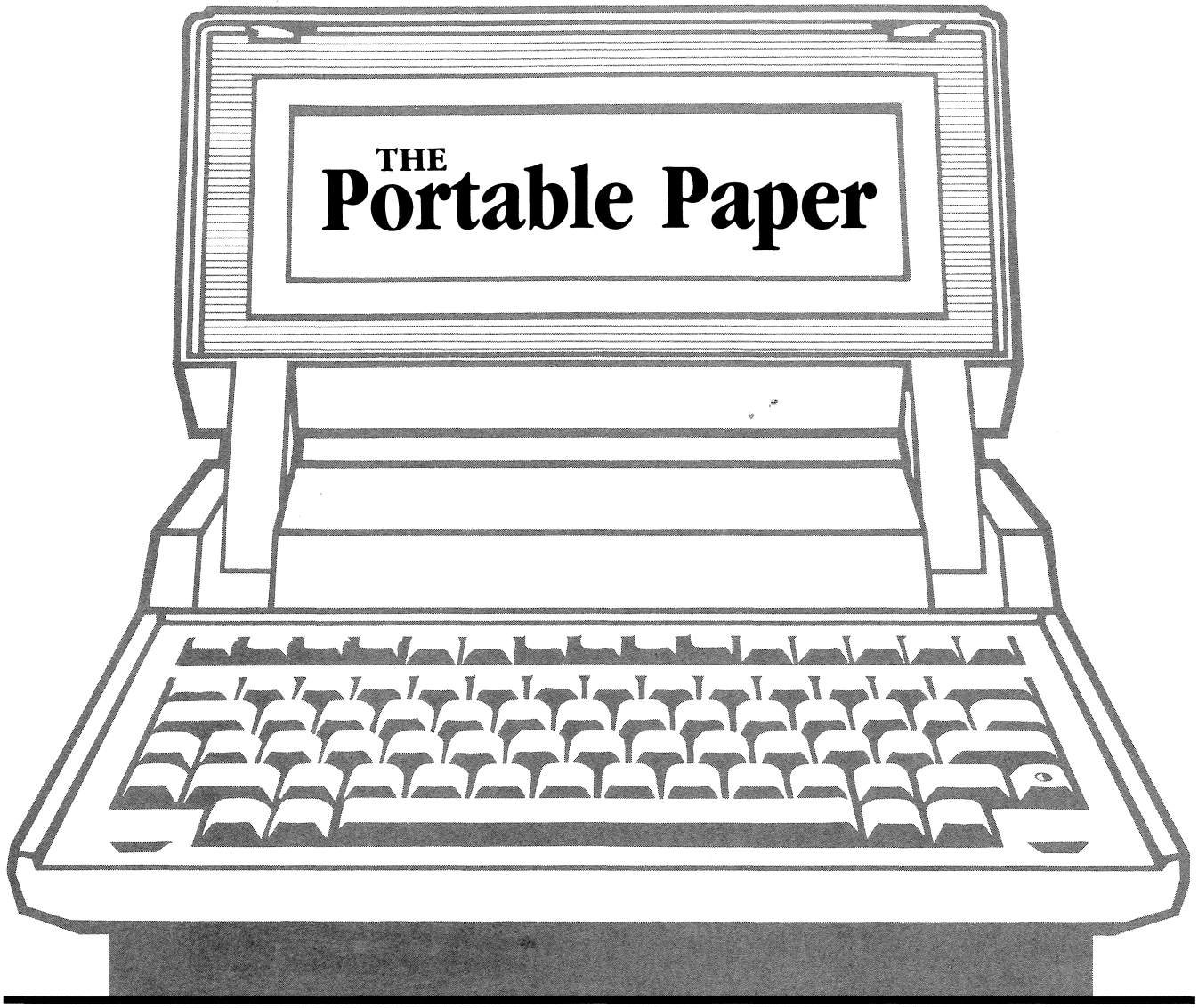

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PUBLISHER'S MESSAGE

I'm excited. An idea, only a few months old, has taken form. Here is the first issue of *The Portable Paper.*

In speaking with many of you, I am struck by your enthusiasm for your machine. Of course, we all know value of being able to type a letter, work up some figures, and transfer that information back to the office while on the go. Still, I suspect that for most of us, our HP110 brings us the excitement and fascination of childhood as we play with this engrossing and multifaceted tool. Our goal with *The Portable Paper* not only is to make you more productive using The Portable, but also by expanding your knowledge and experience to help you enjoy your machine more.

As *The Portable Paper* took form, enthusiasts like yourself, starting contributing. Ed Keefe, Cliff Looyenga, Gary Goodman, Michael Rhodes, and even Steve Sakoman (the leader of the team that designed The Portable) have all added their excitement and expertise to *The Portable Paper.* We look forward to more of their contributions and to yours.

We have had many requests to include information on The Portable Plus in our newsletter. Portable Plus owners will already find many of the current articles relevant to their machine, and we plan to gradually add features which directly relate to the Plus. We are interested in your feedback on this.

If you like this newsletter and the idea of a company (Personalized Software) that specializes in providing products and services for The Portable, tell others about us. Only a small percentage of Portable users have even heard of *The Portable Paper.* The tremendous 20% response to our initial mailings tells us you find our service valuable—so let others also know. And don't forget to send us your ideas for how we can make *The Portable Paper* even better.

Hal Goldstein

P.S. Attention Advertisers—we have a strong base of subscribers who are interested in products which increase the value of their machine.

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LETTERS

Errors In Preview Article

Your directions in the Preview Article, "Hidden Portable Features" for relabeling the function key **f1** has a small typographical error in it. The final dollar sign should be followed by an underscore. Also, the DOS **f7 Toggle Insert** works fine. Suppose you want to copy a file from drive C to drive A, but you forget the **c:** and type:
copy sales.wks oldsales.wks and **Return**.
Retyping everything is OK, but the function keys can be used. Try **< copy up > s < insert > c: < copy All > .** In terms of function keys this is **[f2]s[f7]c:[f3]** and **Return**. You got a good start; keep rolling! - *Gary Goodman, Fredricksburg, VA.*

[Ed - Thanks to all the readers who wrote in about the **prompt** *typo. Many of the newer articles we sent out have been corrected. The command to make* **f1** *key print* **dir a:** *is:* **prompt$e&f0alk6d8Ldir a:dir a:$_** *The second* **prompt** *command in* **mm.bat** *in this issue's MemoMaker column will reset the DOS prompt. More on this next issue.]*

Tell Us Each Step

The largest problem with most computers is the documentation for use of the computer, not the computer as it is. The documentation must be without error as the computer will accept only one correct command at a time. Without this the user loses confidence in the use of the machine. Most of the time it is not enough to give us just the command, we have to have each step put in front of us so we can get to the end result. For example, you published the command, with the Utilities disk in the C drive:
A > C:FORMAT C:/Z/I4
This command typed from PAM or DOS results in "BAD COMMAND".
Jack H. Sparks, Downey, CA 90242

[Ed - I plead not guilty, at least in part. I tried the command from DOS and PAM and it works fine. (The command formats a disk on the C drive giving 10% more disk space - don't use the command if you want to use the disk from an IBM PC.) Perhaps, the problem - and this is your point - was that you included the DOS prompt **A >** *when you typed the command.*

I am well aware that most of us were not born understanding computer lingo. My challenge as the editor of this newsletter is to strike a balance between spelling out each step (and possibly boring experienced users) and giving more general instructions in order to cover more material (and possibly losing our less-experienced readers). Ed Keefe, as you will notice in his articles, is a master at taking one step at a time. Reader feedback is the only way we will know if we are striking the correct balance.]

Thank You, Thank You

Keep up the good work—I like what I see.
Steve Cochran, Lynchburg, VA

You have already earned your $55 by advising me about HP's Time Management program at only $10 with manual. Thanks.
Don Nichols, Dunwoody, CA

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110% Making more of your HP110

by Hal Goldstein

Other HP110 Publications

The only book that we are aware of on the Portable is: The HP110 Portable: The Power To Go published by Que and reviewed in this issue. *The Portable Paper* is the only periodical which deals exclusively with the HP110. However, there are sources which deal with both the HP150 and HP110 series of computers. The emphasis is usually on the HP150, although they all have good information about the HP110.

The *HP Series 100 Communicator* is an HP publication and does a good job documenting bugs and answering questions about the HP110 and HP software running on the HP110. It can be ordered by calling 800-538-8787. The cost is $24, and it comes out six times a year.

We are aware of two other publications on the series 100 computers by very knowledgeable editors. One is *HP110 Users Group* edited by Tim Cullis. It's published by a European organization, *The HP100 Users Group*. (They also have U.S. subscribers.) If you are in the Los Angeles area, Dave Mark publishes *LA SCRUG Notes*. (See *Local Users Groups* for more information about these two organizations.)

Interex, The International Association of Hewlett-Packard Company Users, has a Series 100 users group. Typing **go interex** on CompuServe gets you into a forum with support, discussion, and files available for downloading. Write: *2570 El Camino Real West, Mountain View, CA 94040.*

Finally, *The Chronicle* does an excellent job in covering all the HP computers including the HP110. However, their emphasis is more on HP minicomputers rather than microcomputers. Their address: *Wilson Publications, PO Box 10998, #450, Austin, TX 78766, (512) 250-5518.*

In future issues we will discuss other publications that can help you make the most of Lotus, Dos, and Terminal.

For Techies Only

Highly recommended by the HP support folks in Corvallis (the home of The Portable) is the Portable Plus Technical Reference Manual. I have not seen a copy, but apparently it contains deep system software information and hardware specs both for the Portable and Portable Plus that previously has been unavailable. There is section which explains how to run The Portable off your car battery. You can order only from your local HP sales office. To find out where that is, call 800-367-4772. The manual, costs $100.

Turn On

Have you noticed that sometimes you have to hit a key several times to "turn on" your HP110? In general software which intercepts your key stroke and tells the Portable hardware what to do. When the HP110 is "off", Portable software looks about every 1/2 second to see if a key has been hit, so it may miss your first shot. However, there is one exception to all this: the contrast key (lower right). The contrast key is directly wired to the hardware with no software intermediary. This means pressing the contrast key once will always turn on your HP110.

Changing The Application Order On PAM

There is no direct way to change the order of the applications on your PAM screen. However, if you don't mind a bit of redundancy there is a little trick.

Let's say most of the time you will be using 1-2-3. You would like 1-2-3 to be listed first on the PAM screen so all you have to do is press **Return** when you turn on your HP110. To do this first go into MemoMaker. Create file PAM.MNU with the following two lines.

Lotus 1-2-3
123

If you already have a PAM.MNU file add those two lines as the first two lines of the file. The order of the programs listed in your PAM.MNU file will be the order of the programs as they appear on your PAM screen. This solution puts two Lotus 1-2-3 boxes on the PAM screen. This makes your screen more crowded, but it also makes life a little easier.

Can The Portable Be Upgraded?

With the introduction of the Portable Plus, a number of readers have asked us if it would be possible to upgrade their Portable. Most of us would love a 25 line screen and more RAM. Unfortunately, HP says no, and there is no upgrade program in the works. Sorry.

Unpublicized Recalls—Things HP Will Fix For Free

Hewlett Packard is fairly good about fixing problems when the company is at fault. However, for understandable reasons, they do not advertise these problems. If you are having problems with your HP110, make sure your authorized HP service representative checks through his service notes. Often he can charge the repairs to the HP division responsible for the difficulty. These service notes usually have an expiration date, but sometimes HP is willing to make the repairs beyond that date.

For example, my fully charged HP110 would turn itself off (from low battery) when the battery indicator was in the high 70's. A service note covered the replacement of the battery pack; all I had to do was give serial number of my unit.

(110% continued on page 20)

B Drive—Built-in Software in ROM

MemoMaker B

Creating A Backspace/Erase Key

There's a joke among computer engineers that the definition of a good marketing person is one who can make an engineer's "bugs" look like features. In this example, a MemoMaker bug becomes a useful feature by allowing you to convert the MemoMaker **f7, Help** key to a destructive backspace key: a backspace key that deletes the last character. (As you probably are well aware, the actual MemoMaker backspace key works identically to the left arrow key, performing no deletion.)

Most MemoMaker users will find a destructive backspace key useful; it saves having to hold down the **Extend char** key and the **- Char** key to delete a character. On the other hand, few MemoMaker users ever press **f7, Help**.

Only those who write programs or use the DOS **prompt** command to redefine function keys will be interested in the bug itself; the rest of you can safely skip this paragraph. If MemoMaker is called directly from DOS after redefining function keys, at first all looks well. However, for example, **f5, Get Memo** may not get your memo. Instead, the previous definition of the key remains intact, so pressing **f5** may only result in a few characters getting printed out on the MemoMaker screen. In other words, MemoMaker uses the previous function key definitions even though it properly labels the function keys.

The following procedure turns that bug into an advantage if you would prefer to have your **f7, Help** key function as a destructive backspace key.

Go into MemoMaker and create a file with the following lines.

prompt $e&f0a7k0d4L$eD$eP
memomakr
prompt hthhhhhh [$p]:

Save the file as MM.BAT. Then while still in MemoMaker create or recall file PAM.MNU. Add the following two lines to the file.

MemoMaker
mm

When you exit MemoMaker, two MemoMaker boxes will appear on your PAM screen. If you press **Return** at the first MemoMaker box (MemoMaker A), you will find that the **f7, Help** key has turned into a destructive backspace key. If you are using Time Manager, type **MM** to get into MemoMaker to retain the new backspace key.

Here is a brief explanation of what the two files do. In MM.BAT the first prompt command sends (the screen driver) the proper escape sequence to define f7 as the destructive backspace key. The second line issues the DOS command to start MemoMaker. After MemoMaker is exited the third prompt command resets the DOS prompt (**Fri 14:06 [A:\]:**) back to normal. The two added lines to the PAM.MNU file cause the second MemoMaker box to appear on the PAM screen. Note the explanation in this issue's *110%'s column under "Changing The Application Order On PAM."*

Our thanks to Ken Allen's CompuServe article and to Michael Rhodes, 7-UP USA, Layton Utah, for tips leading to this article. Next month we will discuss in detail the HP110 **prompt** command. Also, we will explain batch files, such as MM.BAT, which contain a sequence of DOS commands.

Tab It

Many MemoMaker users are in the habit of using the right or left arrow key exclusively to move back and forth on a line. Pressing the **Tab** key or holding down **Shift** with the **Tab** is a quicker way of moving right and left while in no way affecting the line.

☆ HP110 RELATED PRODUCT ☆

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Lotus 1 2 3 B

Wandering Around

Do you ever want to roam about in your spreadsheet yet stay anchored at your current cell. The simplest way to wander is to type +, then use any of the normal cursor movement keys. When your wanderlust is satisfied, hit the **ESC** key twice. You'll be back where you started, ready for your next activity.

Cataloging Your Files

READ LISTING OF FILES INTO LOTUS

Here is a great technique to keep track of your current A disk or backup disk files. (Advanced Lotus users: although we start simply you'll find some valuable information towards the end of this article.)

Both Lotus and DOS are used here to create an annotated catalog of disk files. In this example, disk file names on the A drive will be cataloged. First, from the PAM screen type the DOS command:

dir > files.prn and **Return**:

If you had typed only **dir**, a listing of your files would have appeared on the screen. Instead by adding **> files.prn** that same directory listing gets copied into a file called **files.prn**. (Any file name can be selected as long as it has a **.prn** extension. The **.prn** extension is required when you use Lotus.)

Now after returning to PAM, enter Lotus. You are about to import (ASCII) file **files.prn**. From Lotus type: **/fit** Put the cursor on **FILES** and press **Return**. You will get the error message: **Part of file is missing**, but ignore it and press **Return** again.

ANNOTATE FILE NAMES

The entire directory has now been read into column A. Now widen the A column to 40 characters, the length of each directory line. Use the **Worksheet Column-Width** command: **/wcs40** and **Return**.

In column B for each file name of column A, you can put a comment about the content. Now when you store your files to the C drive, include this annotated directory. Six months from now, by referring to this Lotus modified directory, you should have a good idea of what each file contains.

SORT FILE NAMES

There is more we can do with this technique. Suppose we want the files listed in alphabetic order. We use 1-2-3's sort capability. Type: **/dsd**. Now, indicate the range you want sorted. Do so by moving the cursor down four cells so that it rests on the first file name. Type a period: **.** to anchor the start of the range. The **Select** (end) key followed by the **home** key (**Extend char Left Arrow**) takes you to the end of the file. Move up one row so as to only include rows containing file names. A block containing all the file names and comments should now be highlighted in inverse video. Press **Return**. Now type **p** to tell 1-2-3 which column you wish to sort by. The cursor should be in column A, so press **Return**. You want to sort alphabetically, so sort order should be **A Ascending**. Now type **g** and your file names are sorted almost instantaneously. Be sure to save your file as a normal worksheet file (**/fs**) before quitting (**/qy**).

If you would like to be able to sort your directory by date, by file size, or by any of the fields in your listing, things get more complicated. Somehow, each field (e.g., date, time, file name) must occupy its own column. To accomplish this feat, you must make changes to the original **files.prn** file. Then the **File Import Numbers (/fin)** command can be used. The **/fin** command puts any quoted string or number in its own column. Therefore, the file names must be surrounded by quotes (").

For example, two entries that look like this:

TM COM 34944 8-24-85 10:55a
TM HLP 6528 8-24-85 10:58a

must be converted to look like this:

"TM " "COM " 34944 8 24 85 "10:55a"
"TM " "HLP " 6528 8 24 85 "10:58a"

Once converted, every field (including day, month, and year) will have its own column when it is imported into 1-2-3 using the **/fin** command.

To edit each line of each directory by hand is out of the question. Fortunately, the Lotus macro facility allows you to automate the task. (We assume here that you know how to use the macro facility. Future issues of *The Portable Paper* will contain articles adopting a more tutorial approach to macros.)

A MACRO TRICK

A macro to modify **files.prn** requires the symbol {**right**}, which stands for move the cursor to the right, to be written 32 times. (If you were to edit a line by hand, you would press the right arrow key 32 times.) Because 32 {**right**}'s take up memory and take time and patience to enter (if you want them in one cell), you might get discouraged. However, there is a trick which takes advantage of the **copy con** discussion in this issue's DOS column.

From DOS or the PAM DOS line you can type the following, then press Return:

copy con d.prn

Proceed to type **CTRL D** (hold down the **CTRL** key and press **d**) 32 times. 32 ^**D**'s will appear on the screen. Press **Return**, then **CTRL Z** and **Return** again. Go back into Lotus and import the text file **d.prn**. What does all this do for you? It turns out that the 1-2-3 macro interpreter understands **CTRL D** (ASCII 4) to be {**right**}! In fact, we

have developed a table that we'll publish in a future issue mapping almost all the macro symbols to ASCII codes.

A MACRO TO FACILITATE SORTING

For the rest of the article, we continue to assume you are a knowledgeable 1-2-3 user and understand macros. We will outline the steps to create a Lotus worksheet file from the directory such that each column contains a field of the directory.

1. Perform a **File Import Text (/fit)** of the file created from the **dir** command.

2. Create the following macro. Here **D** stands for ^**D**, which is the code for {**right**}.
{edit}{home}D"DDDDDDDD"D"DDDDD"DDDDDDD DDDD{del} DD{del} DDDD"{end}"{down}/xg\r ~
Name the macro cell **\r**. Because of the **copy con** step you performed earlier, you can **File Import Text** the file you created with 32 CTRL-D's and modify the line to create this macro.

3. Execute the macro starting with the first line containing a file name. You know you have reached the last line when the computer obnoxiously continuously beeps at you.

4. Save your results in a new **prn** file by doing a **Print File (/pf)**. Be sure to indicate the proper range before executing **Go**.

5. Clear the current workspace and do a **File Import Numbers** of your new **prn** file.

6. Use the **@DATE** function to convert the date now in three columns to one column. Before converting the date number to a normal date format, write a little macro containing {**edit**}{**calc**}{**down**}. Use this so that the value of the **@DATE** function is saved and is not dependent on the three numbers used to create the value. You can then delete the three columns containing month, day, and year. Now convert the number format to date format.

7. Save your new file as a worksheet. You can now sort according to any of the fields.

8. If the directory contains subdirectories, you will need to create another macro to modify the subdirectory rows. You can recognize a subdirectory because the **>** of **< DIR >** has been captured by the original conversion macro.

This entire procedure can be automated. If you decide to do so, send us your solution, and we will publish the best.

Terminal B

Getting Started on CompuServe

INTRODUCTION

A lot of space in the Terminal column in our first issues will be devoted to CompuServe, the electronic bulletin board service. This is because there are two excellent electronic forums available on CompuServe for the HP series 100 user. Included in these forums are articles, discussions, and programs relevant to the HP110. Also, most of the techniques discussed here for making best use of these CompuServe services will be applicable no matter how you use the Terminal program.

As with most electronic bulletin board services, you pay CompuServe for the time you are connected (accessing their computer) as well as a phone bill if, like us, you are not in a major metropolitan city. There are a myriad of services offered on CompuServe (as well as on other bulletin boards such as The Source). On CompuServe you can do your Christmas shopping, access the latest stock quotes, play computer games, learn a football score, carry on conversations with people with similar interests, find the least expensive airline flight, and much more. You can send electronic mail to other subscribers, including Personalized Software (Hal Goldstein, ID 72257,714), by typing **go email** from any prompt.

You can also get "free" support for your HP110 in the HP Series 100 Forum. Bill Crow and his colleagues do an excellent job in manning the support line. You type in questions and they do their best to answer promptly. Also available are files you can download (transfer from the CompuServe computer to the HP110) which contain the most frequently asked questions about the HP110.

To subscribe to CompuServe, call 1-800-848-8199, or go to your local computer store and purchase a CompuServe starter kit for $30 to $40. The starter kit includes a manual and some "free" CompuServe time that almost pays for the kit itself. CompuServe bills you by the baud rate and time of call. Fees range from $6.00 to $24.00 an hour. There is no monthly minimum. When you use the

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HP110 built-in 300 baud modem during non-work hours, you get the least expensive rate.

PREPARATION

You will probably find that learning to use CompuServe, like learning most other major pieces of software, takes some time. However, we'll give you a start that should save hours of frustration (and CompuServe charges!) Here are the steps.

First, prepare to dial into CompuServe. Assuming you are using the built-in modem, from PAM press **f5, Datacom Config**. Press **f5** again, **Default Values**. Exit pack to PAM with **f8**. From PAM point the arrow to **Terminal** and press **Return**. Press **Return** again when prompted for a **Configuration File Name**. Press **f5, Terminal Config**. For the comment line, type something indicating it is the CompuServe configuration file. Now tab twice to **Phone Number:**. (Next issue we will tell you how to set up your **Logon String**, so you do not have to type in your ID and password each time.) Here, type in the phone number you must dial to log into CompuServe. The TymeNet or CompuServe number you require is available in your starter kit or can be obtained by calling the CompuServe support line (800-848-8990). Page 1-14 of the "Terminal" section of the HP110 Owner's Manual describes the optional symbols you can use in the phone number. At Personalized Software we call Des Moines and put **1-270-1581** in the **Phone Number** field.

The rest of the settings are fine. Press **f2, Store File** to save this configuration. We call our file **cs.ter**. Now, press **f8, Exit Config**.

To anticipate downloading ASCII text files (files that we can edit in MemoMaker), press **f4, Download Config**. Tab to **Remote Invocation:**. Type **R** (which is the CompuServe **read file** command). Tab to **Protocols:** and type **f3, Next Choice** so that **Protocols:** is **off**. Now, press **f2, Store File**. You can call the file **cstext.dow**. Now press **f8** a couple of times to exit the Terminal program.

LOGGING ON

Now you're ready to go. Transfer your phone jack from your phone to the back of the HP110. Put the PAM cursor on Terminal and **Return**. Type in **cs.ter** (or whatever you named your terminal configuration file). On the bottom of your screen you will see a message like **Dialing = > 1-270-1581** and then **Waiting for Carrier** and then if all goes well **CONNECTED**. As soon as you see **CONNECTED**, type **CTRL-C** (hold down the **CTRL** key and type **c**)—don't press **Return**. You will be asked for your ID. We type in: **72257,714**. When prompted, type in your password. Your password will not be echoed back to you on the screen, so type carefully.

The first time you sign on, CompuServe will ask you all sorts of questions (like what is your credit card number). You will be asked questions about your computer. Gary Goodman of Fredericksburg, VA writes that "the following settings work well for the HP110—and allow captured data to be easily edited and printed from MemoMaker." Select **OTHER** as the **Terminal Type** and the following as **Terminal Parameters**.

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TERMINAL TYPE
OTHER Baud Rate: 300

TERMINAL PARAMETERS

1 Terminal width	79 CHARACTERS (for MemoMaker)
2 Screen size is now	16 LINES
3 Form feeds are	SIMULATED
4 Horizontal Tabs are	REAL
5 Terminal supports	UPPER/LOWER
6 Caps Lock is	OFF
7 Line Feeds are	SENT
8 Parity is	EVEN
9 Blank Lines are	SENT

You may modify the Terminal Type and Terminal Parameters by typing **go default** at any CompuServe prompt.

In general at any prompt, except when you are asked to push **Return (< CR >)**, you can type a **go** or any other command. If you ever don't know how to exit a menu screen, type: **t** for **top** to go back to the previous menu. To enter the HP 100 Series Users Forum sponsored by HP, type **go hp**. To enter INTEREX, the international HP users group, type **go interex**.

DOWNLOADING KEY FILES

We will now enter the HP Forum in order for you to download some key files. When you download, you are transferring files from the **host** CompuServe computer to your HP110. In the HP Forum there is a **data library** of files available for downloading. **Data library 6** contains instructions for making the most of the HP Forum. There are three files that would be good to download to get you started. The procedure is the same for each, so we will just describe how to download file **gtstrt.hlp**, which gives you an overview of the HP Forum.

Assuming that you are logged on to CompuServe, type **go hp**: In general, press **Return** whenever instructed to do so. In order to enter data library 6, at the first available non- **< CR > prompt within the HP Forum, type: dl6** and **Return** (**xa6** also works). After pressing **Return** as instructed, type **bro gtstrt.hlp** but do not press **Return** yet. The command means, browse or look at file **gtstrt.hlp**. On your keyboard if the function key labels are not up, press the **User System** key. Now press **f4, Download Config**. Press

f1 to **Load File cstext.dow**. Tab to **To Local File:** and type in the HP110 file name for the file to be downloaded. The simplest thing is to keep the same name, so type: **gtstrt.hlp**. Note that when **browsing** files, **From Remote File:** remains empty.

Press **f8** to **Exit Config** and you are ready to download the file. Press **f1, From Host**. Until you tell the HP110 differently, from now on what ever gets typed to the screen will be captured in file **gtstrt.hlp**.

Press **Return** if nothing is happening. An abstract of file **gtstrt.hlp** gets printed to your screen. When prompted, type **rea** to read the whole file. You know the file has been sent when you are asked for a **< CR >** . Press **f8, Exit** to end the transfer. Now, give CompuServe the command **t** to go back to the "top" of the menu.

Repeat the procedure for files **more.hlp** and **dnlll0.hlp** (both in data library 6). Start with **bro more.hlp**. **more.hlp** contains the file names and descriptions of the Data Library 6 instruction files. **dnlll0.hlp** is an absolutely essential instruction file which describes how to download text and program files. Many *Portable Paper* subscribers have asked us how to download program files; **dnlll0.hlp** contains the answer. In the next issues we will elaborate on the procedures.

If **CONNECTED** ever appears at the bottom of your screen, just press **Return**. In fact, if nothing seems to be happening, pressing **Return** one or more times is the first thing you should try. You might also try **CTRL-C**. If all else fails, hold down **CTRL** and **Shift**, and press the **Break Stop** key. This is not the ideal way to exit Terminal, but it will get you logged off CompuServe and back to PAM. To exit CompuServe correctly, at any prompt, type **bye**.

In the near future, Personalized Software will be selling at a nominal fee many of the public domain software and articles found on the CompuServe board and elsewhere. (Because of legalities outlined in Data Library 6 file **policy.hlp**, please note that the files we will distribute are not obtained from CompuServe.)

DOS B

The COPY CON Command

HOW IT WORKS

The DOS copy command performs many useful functions for the HP110 user. You can for example, create a file using **copy** without going into MemoMaker. Furthermore, as Gary Goodman tells us, you can use **copy** to place an escape sequence (or some of the control codes) within a file. (This feat is impossible using HP110 MemoMaker.) An escape sequence is a sequence of characters beginning with the **ESC (escape)** character (ASCII 27). In the HP world, escape sequences are used to tell the printer to do things like print condensed or to tell the screen to do things like redefine a function key. We will discuss the copy command and escape sequences in detail in future issues.

For now, suppose you want to install the Time Manager program into PAM, that is, create a new box on the PAM screen called Time Manager. Assuming the Time Manager program (**tm.com**) is on the A drive, you need to create a two line file called **pam.mnu**. To do this using the copy command, from the PAM's screen's top (DOS) line, type:

copy con pam.mnu

When you press **the Return** key, you find yourself at the beginning of the next line. At this point, type in the following two lines:

Time Manager
tm

When you have typed in your file, hold down the **CTRL** key and press **z** and then **Return**. **pam.mnu** has now been created, and upon returning to PAM, a Time Manager box will appear in front of the MemoMaker, Lotus, Terminal, and DOS boxes.

The general form of the **copy con** command is:

copy con file.ext

where **con** stands for console and **file.ext** stands for a file name of your choosing. The command means copy whatever is about to be typed (until **CTRL z** and **Return** are pressed) to the file you name. (Note if a file already exists with that name, you will destroy that file.)

PUTTING AN ESCAPE CHARACTER IN A FILE

You can embed an escape character into your file by pressing the **DEL ESC** key followed by the **&** key. When

PrinterTalk Winners

Personalized Software is pleased to announce that ten *Portable Paper* subscribers from our two contests have won PrinterTalk—The MemoMaker Enhancer—a 49.95 value. The winners are: Linda Rizzoto, Jackson, IN; D. Peckenpaugia, Costa Mesa, CA; John Keiluhy, Cherry Hill, NJ; D. Eisenhofer, Bristol, PA; Donald Hinman, Lansing, MI; Bill Baird, Port Jervis, NY; D.B. Vidricks, Worthington, OH; Sid McDonald, Arab, AL; Stephen Spehn, Mcas Tustin, CA; R. Greene, New York, NY.

those two keys are hit in succession, a ^ [appears on the screen denoting the **escape** character. Once an escape character is captured in a file you can do a DOS **print** to send the characters in the file to the printer, or DOS **type** to send the characters in the file to the screen.

Advanced Lotus users: Note that you can **file import text (/fit) prn** files containing escape sequences and control characters. If you think you can now fool MemoMaker into accepting escape sequences, forget it. MemoMaker wipes out any **escape** or control character when it reads in a file.

An example of embedding an escape character: with the command **copy con condense.prn**, you can create file **condense.prn** containing five characters: ^ **[&k2S**. (**&** gets typed twice, once to help create the **escape,** ® **[** character and again to create itself.) After you issue the command **print condense.prn**, your ThinkJet printer until told otherwise will print in condensed print. Your printer manual contains the codes your printer accepts. Appendix D, pages 6-8 of "Using HP110" of the HP110 Owners Manual contain the escape sequences required to manipulate the screen and function keys.

DOS Commands

There are three special file extensions of which you should be aware: **bat, com,** and **exe**. If you type within DOS a file name that ends with a **.** followed by one of those three extensions, DOS considers it a command. That means when the file name with or without the extension is typed at the DOS prompt or from the PAM screen's top (DOS) line, something is likely to happen.

If the file ends with **com** or **exe** it is (or should be) a program file, and that program will be executed. For example, if the Time Manager program file, **tm.com** is on the A drive, typing **tm** from the PAM line will cause Time Manager to start. Similarly, Lotus 1-2-3 (which is contained in file **123.exe**) can be started by typing **123**.

A file ending with **bat** is a batch file and contains one or more DOS commands. The file **mm.bat** described in the MemoMaker section of this issue can be executed by typing **mm**. We'll have more on batch files in future issues.

A Drive—Application Software in RAM

Time Manager A

Review of Time Manager Program

by Ed Keefe

When I first received my copy of the Time Manager program, I was thoroughly amazed at its capabilities. Be sure to use it, if for no other reason than that it came from HP, relatively FREE.

My copy of the Time Manager program came without any documentation, but this posed no real problem. You'll find that using the program is very intuitive—almost as easy as painting by numbers. For those parts of the program which are not self-explanatory, the context-sensitive help screens do much to make the program more understandable.

In terms of functionality and ease of use, the Time Manager program seems to be HP's answer to such programs as *SideKick* from Borland or PolyWindow's *DeskPlus*—although unlike these programs, Time Manager is not memory-resident. It's the next best thing to a RAM-resident program. The operation of the program is fast and efficient. It is driven by function keys, and in that respect it is faster to operate than a menu-driven program like DeskPlus. When the Time Manager program resides on the electronic disk along with its bevy of "to-do," appointment, and help files, it operates in its optimum fashion.

There is one serious drawback to Time Manager. The program and its attendant data files must be on the A drive in order to operate correctly. This poses an immediate problem for an already overcrowded computer. The continuous memory of the HP110 is a "mixed blessing" in this regard. It's all too easy to develop your favorite spreadsheets and programs. Eventually, these programs get used more and more and they tend to reside on the A drive permanently. Now here comes another program that has to be

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on the A drive (electronic disk) in order to operate. The Time Manager program, along with its "help" file and its data files, can easily consume 45K bytes of memory. And more memory is used whenever you add items to the "to-do", appointment, address, or notes lists. This excessive consumption of precious memory may prevent some people from using the program.

There are a couple of ways around this dilemma. The first solution is costly: upgrade to the HP Portable Plus computer and get the MemoMaker ROM. Time Manager is included on this ROM so that using it means that you only need room on your electronic disk for the data files.

The other "workaround" is less costly, provided you have the 9114 disk drive at your disposal, and are satisfied with using the Time Manager program only once or twice a day.

With such limited use, you will probably find yourself keeping appointments and "to do" lists on the computer and getting a printout of each at the start of the day. In the evening, you may find yourself using the program to update these lists and perhaps use the address list and phone dialer.

This less costly workaround involves loading the program into the computer from the disk drive along with copying the data files onto the electronic disk. When you have finished using the program, you need to copy the updated data files back to the disk drive. Since all of this copying to and from the disk drive can be a nuisance, I have created a BATCH FILE and a method for installing the batch file in the application screen of PAM. If you can type in the batch file, and if you are willing to wait about 15 seconds for the program to load from disk, then you may find this workaround acceptable. In the next issue I will take you through a step-by-step procedure for creating such a batch file.

A FINAL NOTE: I had been using the Time Manager program for approximately two weeks before I received a copy of the program's documentation.

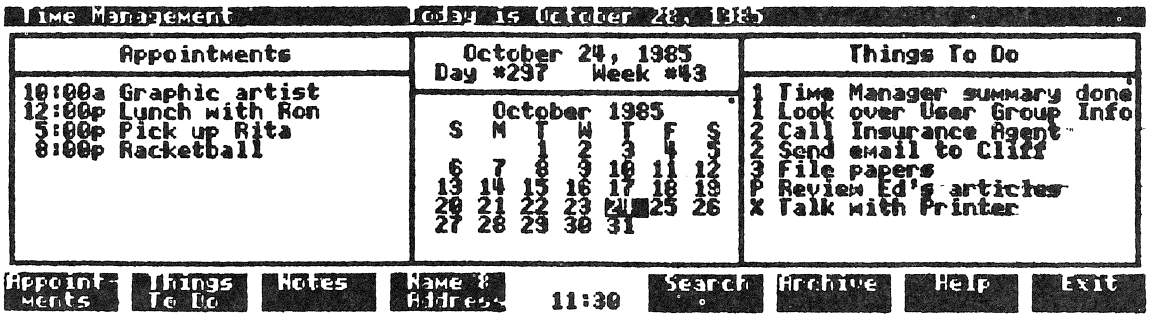
The combined documentation/user's guide is approximately 35 pages long. It can be read in one sitting, especially if you have been using the Time Manager program already. Most of the documentation is a replication of the Help Screens contained in the program. The new insights to be gained from the manual are in the section which describes how to connect the HP 110 computer to your telephone so that you can use the program's auto-dialing feature. The drawings and text illustrate clearly how to make the electrical connections and how to use the auto-dialer. (The article in this below "If You Don't Have A Manual . . ." addresses these and other points.)

The documentation makes one appreciate even more the hidden beauty of this program. The author of this program, Steve Sakoman, is a true master of his craft. He has included a tremendous amount of information-processing capability in one very easy-to-use package.

This programming artistry, along with the incredible price-performance ratio of the Time Manager program, has already made it one of my favorites. I trust it will become one of yours too.

What Time Manager Does

The main or "Calendar" screen of Time Manager shown here tells most of the story. The appointment list and "to do" list for the highlighted date surround a month-



ly calendar. On top and bottom of these three boxes is a hidden DOS command line and function keys.

THE DOS COMMAND LINE: Just as in PAM, you can issue a DOS command from Time Manager. When you type anything but an arrow or function key, the top inverse video line containing today's date disappears and the DOS **[A:\]** prompt takes its place. This means from Time Manager you can easily call Lotus, Terminal, or any program your HP110 can access.

THE CALENDAR: By moving the cursor (arrow) keys you can easily highlight different days or change months.

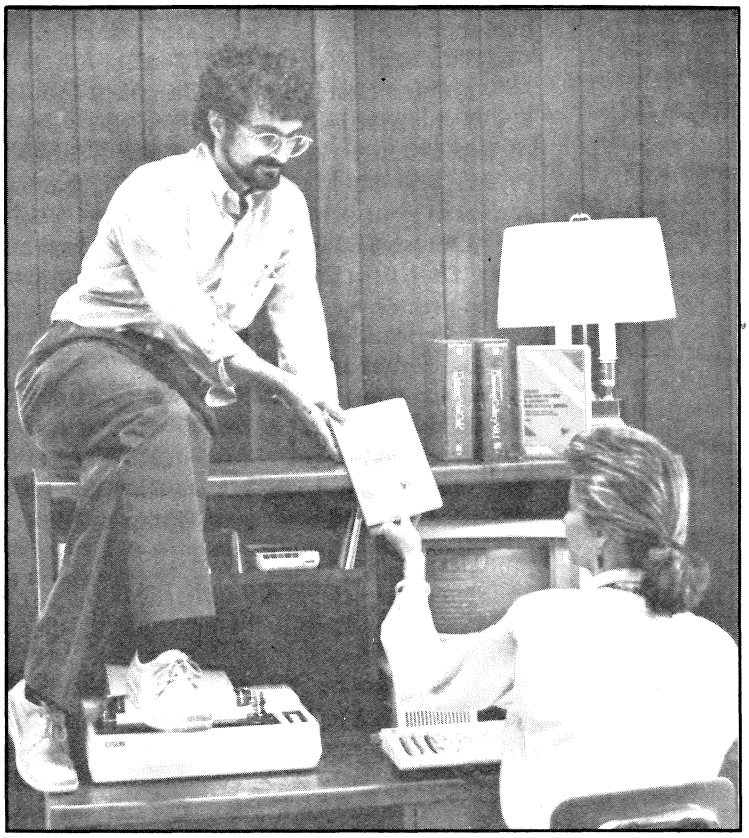
APPOINTMENTS: Pressing **f1** allows you to type in, change, erase, repeat, or print appointments. You can tell the computer to beep at you at appointment time.

THINGS TO DO: **f2** allows you to create or print a prioritized "to do" list. It lets you mark items completed or partially completed. Uncompleted items automatically appear on the next day's "to do" list.

NOTES: **f3** places you in MemoMaker. It automatically puts you in a file named after the highlighted date, but you can edit or create any file you wish.

NAME & ADDRESS: You can create, modify, or print a name-and-address list of up to 100 names using **f4**. You can add two phone numbers and a comment to each entry. You can automatically dial any number on the list if your phone is properly connected to the internal or an external modem.

PUT AN EXPERT ON YOUR SHELF



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SEARCH: **f5** allows you to easily search through your appointments, "to do" list, notes, and addresses for any word or phrase. For example, using this search feature, you can easily find a name in your electronic address book.

ARCHIVE: With **f6**, you can simply save past appointments or things to do on an external disk, freeing up memory yet keeping a record of appointments and accomplishments.

HELP: At almost any juncture, there is a help key which clearly and concisely explains each of your choices. This means you can easily use the program without a manual.

If You Don't Have A Manual . . .

If you received your free copy of Time Manager from us (Personalized Software) or downloaded it from CompuServe, you do not have a manual. But as you've no doubt discovered, you probably don't need one. Time Manager is easy to use and supplies built-in help screens if you get stuck. Time Manager can be invoked by either installing it into PAM or by typing **TM** on the top (DOS) line of the PAM screen—assuming file TM.COM is on the A drive.

Once you use Time Manager a bit, you won't need the file TM.HLP which contains all the context-sensitive help messages. Deleting TM.HLP saves you 6528 bytes on your A drive. You can easily create a mini-manual for reference as follows:

This Year's Themes

Issues two through five of *The Portable Paper* will each have a theme based on B-drive built-in software. Send in your contributions according to upcoming themes. The entire readership welcomes your knowledge.

ISSUE 2—DOS commands and Utilities
Mail in your DOS tricks and information, or utility programs that are useful on the HP110.

ISSUE 3—MemoMaker and Word Processors on the HP110
Tell us of your experience with word processors on the HP110. Give us your MemoMaker tips and tricks.

ISSUE 4—Terminal and Electronic Bulletin Boards
Mail in your experience using Terminal. Give us configurations, autologon sequences, tips, and opinions of on-line information services. Tell us about good public domain bulletin boards for information and software relevant to the HP110.

ISSUE 5—Lotus and Lotus products
Send us your Lotus tips and macros, especially if they relate to the HP110. Tell us of products or free software that run with HP110 Lotus.

CREATE YOUR OWN MANUAL

1. If you have a ThinkJet or an HP printer which prints graphics, from PAM press **f6, System Config**. Move to **Printer**, the third item down in the right column, using the cursor (arrow) keys. Press **f3, Next Choice**, until you see **HP Graphics only**. Press **f8, Exit Config**, to return to PAM.

2. Enter Time Manager. Press **Shift** and the **Print Enter** key. If you have a graphics printer, you will get a duplicate of the calender screen on paper. Without a graphics printer, you will get a dump of all the characters from the screen as your printout. Your purpose is still served.

3. Press **f7, Help**. Move the printer paper down several lines. Then do a **Shift Print** again to dump the help screen to the printer.

4. Repeat this process for each screen and help screen in Time Manager.

5. Go back into **System Config** from PAM and reset **Printer** to **HP Graphics / Alpha**. Note that if you want the Help screens to be printed normal size rather than graphics size, you need to have **System Config, Printer** set to **HP Graphics / Alpha** when you dump the help screens.

MISSING FROM YOUR MANUAL

There are several points in the manual (or that should be in the manual) which you might not discover on your own:

1) The date on the top line of the Time Management calendar screen is the system date and can only be changed using **f3, Clock Config** from the PAM screen.

2) If you press any key other than an arrow or function key from the Time Manager calendar screen, you will produce the DOS prompt **A >** on the top line. If you accidentally hit a key, press **Backspace** to delete the character then press **Return**. If you type from the calendar screen: **123, terminal**, or **command**, you will find yourself in Lotus 1-2-3, the Terminal program, or DOS respectively. Pressing **f3, Notes**, puts you in MemoMaker.

3) Pressing the **Enter** key (lower left of keyboard) moves the date on the calendar to today's date.

4) **Extend char left arrow** and **Extend char right arrow** take you to the first and last day of the month on the calendar.

5) In general, the **Extend char** keys work as they do in MemoMaker when typing in data for any of the lists. In particular **Extend < char > -char** takes you in and out of insert mode. **Shift Tab** and **Tab** move you back and forth through fields when entering data.

6) If you wish to edit or back up your lists then know that:

a. TM.TDO contains the "to do" list.

b. TM.NAM contains Name and Address list.

c. *.NOT contains the various note files. * stands for dates. So, **10-24-85.NOT** contains Oct. 24, 1985 notes.

d. PAM.ALM contains the Appointments list.

You cannot edit the TM.NAM file from MemoMaker since lines may be too long. The format for PAM.ALM files is described in the Users Manual under **"alarms"(2-26)**. Those lines in PAM.ALM beginning with % have no alarm set.

7) You may store no more than 200 items in either the Appointments or "to do" lists, and no more than 100 names and addresses. You will receive a warning message 25 items before the limit on any list.

8) You can dial a phone number from Time Manager either using the HP built-in modem or a Hayes compatible external modem. To use this capability you need a duplex jack and an extra phone cable, both of which can be purchased from an electronics or telephone supply store. Here's how it works.

a. Plug the duplex jack into the telephone.

b. Connect one cable to your HP110 modem jack and to one of the plug-ins on the duplex jack.

c. Connect the cable coming from the wall jack to the other plug-in on the duplex jack.

d. With the built-in modem: from the PAM **f5 Datacom Config**, press **f5, Default Values**. With an external modem connected to the serial port: from PAM **Datacom Config**, change **Serial port** to **RS-232**. Set the correct baud rate. The default settings are correct for the rest of the fields on the screen.

e. From Time Manager's Names & Addresses menu, move the cursor key to the name of the person you want to dial and press **f5, Dial**.

f. After selecting which of the person's two numbers to dial, pick up the phone only after a message on the screen tells you to do so. You have made the connection.

g. When you originally type in the phone numbers on the address list, you can use any of the codes (, for pause) that the owner's manual Terminal section describes. If your phone uses - or * for special dialing features, you may include these in your phone number.

9) When you decide to save your appointments or "to do" list, the Archive function stores all entries, prior to the date you specify, in your choice of file name. It then deletes those entries from the master list (PAM.ALM or TM.TDO).

10) Time Manager may display certain error messages. Most of them have to do with system limits: not enough room on your disk, or too many items in a list. Other error messages tell you that you entered a date or time incorrectly.

A Discussion With The Author of Time Manager

Steve Sakoman was the project leader for the team which developed the original HP110 portable computer. He also is the software author of Time Manager. He left HP and is now working for Apple, where he is in charge of all new developments for the Macintosh. We will be publishing interviews with Steve from time to time. Here are excerpts from a phone conversation I recently had with Steve.
—Hal Goldstein

Hal: Who was Time Manager designed for?

Steve: I designed Time Manager for people on the go, for people who wanted an efficient tool to manage their day without having to spend time studying or referring to manuals. Time Manger was to serve as an alternative to PAM as a DOS SHELL. I wanted Time Manager to be high-performance, taking advantage of the electronic disk. You start the machine and you have your appointments, things to do, and calendar right in front of you.

Hal: Our reviewer's only complaint about the program was the requirement that all Time Management's data files must be located on the A drive.

Steve: It was a conscious design decision. We originally had a version without that requirement, but we felt the slowness of that version was antithetical to its being an efficient, easy-to-use productivity tool and an alternative to PAM and DOS.

Hal: I talked to a Portable Plus user recently who complained about the 100 names and address limitation. Can anything be done?

Steve: Given memory constraints of The Portable, it is not practical to change that limitation. However, HP could easily change the code for the Portable Plus version since more RAM can be added to its electronic disk.

Hal: I look forward to talking with you about how the HP110 was created. I am sure our readers will appreciate it.

Steve: It will be a pleasure. Give me a call any time.

Hal: I will!

How To Get Time Manager Free

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Next Month

- Ed Keefe tells how to modify your HP110's screen at low cost so as to "prevent blindness".
- A close look at the hardware and software differences between The Portable and The Portable Plus.
- In A DRIVE, we'll feature the Norton Utilities which allow you to ressurect deleted files fromt the dead and perform other miracles.
- In B DRIVE, we'll feature DOS commands, including batch files and the **prompt** command, plus tips for using Lotus, MemoMaker, and Terminal.
- Regular Departments: "110 Wizardry," Ed Keefe's "Looking Glass", "110 %" and "The Connection".
- Readers' Contributions

3 1/2" or 5 1/4" disk and a stamped, self-addressed envelope. Write "Please hand cancel" prominently on both envelopes. We have found that standard, #10 business envelopes with $.39 postage work fine for 3 1/2" disks. If you prefer, you can mail us a check for $7.50 with specification of disk size, and we will mail you a disk. Send to *TM Disk, c/o Personalized Software, P.O. Box 869, Fairfield, IA 52556.*

At no charge, we will also include on your disk a useful pack utility, PACK.COM. PACK.COM eliminates disk fragmentation, which means when pack is run on the HP110 A drive, changing the boundary between the electronic disk and memory will no longer be a potential problem.

Hewlett Packard has made Time Manager and Pack available on Compuserve (download PACK.COM, TM.COM, TM.HLP, and TM.DOC from the HP Series 100 Forum). Alternatively, if you send $10 to *TIME MANAGER, Hewlett Packard, Portable Computer Division, 1000 N.E. Circle Boulevard, Corvallis, Oregon 97330*, HP will send you a Time Manager disk and manual (but not PACK.COM).

Turbo PASCAL A

TURBO-CHARGING THE HP110
by Ed Keefe

ABSTRACT: This is an article extolling the benefits of using the Turbo Pascal programming environment on the HP110 computer. The author shows how to configure the Turbo Pascal compiler/editor so that it will operate correctly on a 16 line display. Turbo Pascal is a registered trademark of Borland/ Analytica.

INTRODUCTION

I am well aware, from talking with other owners of the HP110 Computer, that most owners and users of this portable computer do not use it to write computer programs.

Of those who do use the computer to write their own programs, the majority use some form of the BASIC language: either MicroSoft BASIC or GW BASIC. Perhaps the second most popular "language" that people use on the HP110 is the dBASE II command language. All of these options have their merits, but the one greatest drawback, in my estimation, is that programs written in these languages are "interpreted" rather than compiled and hence can only run when the BASIC or dBASE program is resident in the computer. This takes up computer memory and slows down the execution of the program. (HP does sell the MicroSoft BASIC compiler.)

I had been using the Turbo Pascal programming environment on the IBM-PC for several months. (I teach Pascal programming at the local community college.) I was already sold on the power of Pascal as a better instructional tool, and was very much satisfied with the speed and ease of use of Turbo Pascal.

I could write my programs using the editor that comes with the Turbo PASCAL package with little or no difficulty. The editor is a WordStar work-alike and incorporates many of the same control commands as that venerable word processor.

The Pascal compiler is one of the first single-pass compilers for microcomputers. This means that a correctly written program will be translated from its text version (source code) into its machine language equivalent (object code) in one very fast compilation: an average of 100 lines per second! That means that development time for writing a Pascal program is in the same time frame as writing a program in BASIC. In both cases you are not forced to wait 15 minutes to a half hour for the program to be compiled. If the compiler encounters a mistake in your program, it will stop compiling, give you an error message on the screen and let you move directly to the text version of your program at the spot where the error occurred. Correcting mistakes is done more easily in Turbo Pascal than it is in BASIC!

I was also pleasantly surprised when I called Borland International and discovered that Turbo Pascal was available for the HP 150 and HP110. (If you decide to order this program, be sure to specify that you want the MS-DOS version on a 3.5 inch disk.)

What you will get for the relatively small expense of $70 is the generic version of the Turbo Pascal programming environment: a 38K byte program that contains both the compiler and editor. On the same disk there is a 1200 line Pascal program called Calc. This program produces a single screen electronic spreadsheet. However, this program will not work properly on the HP110 since it is designed for a screen with 24 lines rather than 16 lines. (This is no great loss since we all have Lotus 1-2-3 to play with.)

What you will not get are the added routines that come with the IBM-PC version of the Turbo Pascal program: window creating capabilities, sound, and turtlegraphic primitives, and color commands.

If you have been toying with the decision of purchasing this program, perhaps now is the best time of year to take the plunge. Borland International is sponsoring a Christmas sale. For $125 you get the Turbo Pascal program along with Turbo Tutor (a great learning package) and the Turbo Toolbox (a series of data base management programs, which may save you the cost of buying dBASE II or

PFS File). The Toolbox and Tutor have recently become available along with Turbo Pascal on 3 1/2" disk for the HP150 and HP110.

INSTALLING THE TURBO PASCAL COMPILER/EDITOR

One of the first tasks you will have to accomplish when you get Turbo Pascal is to install the program on the HP110. You see, the program comes in an "off-the-rack" fashion. It is up to you to "make some alterations" to the program so that it will "fit" the HP110 like a tailor-made suit.

Oddly enough, Borland International never expected that anyone would use Turbo Pascal on an HP110, so they do not include instructions for tailoring the program for this machine. However the HP110 is close enough to the HP 150 in operation that most of the procedures for this desktop machine apply to the HP110.

What follows is a set of instructions that I have found, by trial and error and a couple of calls to Borland International, will do the installation procedure very nicely. One of the side benefits of these instructions is that when the installation procedure is done, you will find that the Turbo editor behaves almost like the MemoMaker editor. You won't have to learn all the esoteric Wordstar commands in order to edit your programs. But, just in case you like WordStar, you will still be able to use the control commands you have grown so accustomed to. You can have it both ways!

The installation procedure is not altogether straightforward so I will try to be as specific as possible. For those of you who are reading this article just to see what the punch line is, expect to be bored. For those of you who are reading to install Turbo Pascal, expect to be somewhat frustrated. Here goes:

I. Prepare Turbo Pascal Work Disk

A. Take your distribution disk from Borland and make it write-protected by opening the little square hole in the lower left corner. You don't want to write anything to this disk.

B. Prepare another disk by inserting it in the disk drive and formatting it using the Format command contained in PAM.

C. Remove the disk from the drive when it has been formatted and insert the Borland disk.

II. Copy Turbo Pascal To Your A Drive

A. Assure yourself that you have about 96,000 bytes free on your **A:** disk (the electronic disk).

B. Type in the command on the PAM DOS command line:
COPY C:TURBO.* A:
and press the **Return** key. Two files will be copied to the electronic disk.

C. Type in the command
COPY C:TINST.* A:
and press the **Return** key. Three files will be copied.

D. Remove the Borland disk from the drive and put it in a secure place. Insert your formatted disk in the drive.

III. Start Installation Procedure—Configure HP110 Screen

A. Now type in the command **TINST** and press the **Return** key. You should see the opening message of the **Installation Program**.

B. Begin by pressing the **S** key to modify the screen or terminal definition. You will see a list of 30 or more possible terminals that may be installed directly.

C. When the program asks **Which terminal?** , key in 11 to choose the closest computer to the HP110 (the HP 150).

D. **Do you want to modify this definition...?** YES: Press the **Y** key.

E. **Terminal type**: HP 150 Change to: HP110

F. Now comes the first tricky part. **Send an initialization string...?** YES you do want to. The current string is **ESC&slAESC&jS**
(In this article **ESC** stands for ASCII 27, the escape character.) You want to change the **j** to a semicolon **;**. Here is how to do this: when the program prompts you with **Change to:** type in the following sequence of numbers:
27 38 115 49 65 27 38 59 83
Be sure to press the space bar between each number. (The numbers are the ASCII equivalents of the initialization string.) When you have double checked the numbers, press the **Return** key. If you find a mistake, you may use the backspace key to back up to the mistake and retype as much of the line as needed.

G. The procedure for **reset string** is very similar to the above. In this case you want to change the **j** to **;** also. The string of numbers is:
27 38 115 48 65 27 38 59 82

H. For all the prompts beginning with **CURSOR LEAD-IN** and ending with **CLEAR SCREEN command:** simply press the **Return** key. (I count 9 prompts.)

I. At the prompt:**Does CLEAR SCREEN also HOME cursor?** respond with **N** for NO and, when the next prompt :**HOME command** appears, respond by making sure that the HOME command is **ESC H**. Do this by typing in the ASCII equivalent numbers **27 72** and pressing the **Return** key.

J. If the **Delete Line** command is **ESC M** , press **Return**; otherwise key in the numbers **27 77** and press **Return**.

K. If the **Insert Line** command is **ESC L** press the **Return** key otherwise key in the numbers **27 76** and press the **Return** key.

Received for Review

Personalized Software has received the following three software packages for potential review in future issues of *The Portable Paper.* All three run on the HP110, HP150 and the IBM PC. The quotes are from literature sent with the products.

From Emerging Technology we received EDIX, "a sophisticated word processing software package for the serious writer". Write: *4760 Walnut Street, Boulder, CO 80301, 303-447-9495.*

IE SYSTEMS, INC, 112 Main Street, Newmarket, NH 03857, 603-659-5891 sent us ACCULINK, a communications package (you can use instead of Terminal). It is "flexible—menu driven for the novice to macro programmable for the expert".

Finally, we received MoneyCalc and Tax Planner from *Money Tree, 760 SW Madison, Corvallis, OR 97333, 503-757-1178.* These Lotus templates are for financial and tax planning.

L. If the **Erase to End of Line** is **ESC K**, press **Return** otherwise key in **27 75** and press **Return**.
M. The next two prompts for **Starting and Ending Highlighting** are best left as they are for aesthetic reasons. Just press the **Return** key in response to both prompts.
N. In response to the **Number of lines** prompt, key in **16** and press **Return**.
O. In response to the **Number of columns** prompt, key in **80** and press **Return**.
P. Press **Return** for the last three prompts in the series.
Q. When the program asks you if the definition is correct, respond with **Y** and **Return**.
R. When asked for the operating frequency of your microprocessor, use the single number 5 and press **Return**. Don't panic when you see the error message.
S. At this point, the program should display the following message. **WAIT SORTING DEFINITIONS □□□□I/O ERROR 99, PC = XXXX** (hex number varies), **PROGRAM ABORTED**. Press any key to return to PAM.

So far, only the TINST.DTA file has been updated. The TURBO.COM file has not been altered. If you try to edit a file with Turbo at this point, you will only get a screen full of garbage.

T. Press any key to get back to PAM and type in **TINST** again and press **Return** to get back into the installation program. Select the **S** option again and choose terminal **11** (this time it is the HP110.)

When the prompt asks if you **want to modify this definition...** respond by typing **N** and pressing **Return**. This time the program will run to completion and TURBO.COM will be modified for the HP110. You should see the installation menu appear on the screen.

IV. Defining The HP110 Keyboard

A. This time choose the C option to redefine the keyboard for the Turbo editor. (If you are satisfied with using WordStar commands exclusively, you can skip the next series of instructions and move to V below.)
B. What follows is a list of alternate key definitions required so that you can use the HP110 cursor (arrow) keys and the **Extend char** (like **Prev** and **-Char**). I will just show the finished product.

In the finished product you will sometimes see Control characters, such as **Ctrl-A**. In order to produce such key redefinition, hold down the **CTRL** key and press the called for letter. Think of the **CTRL** like the **Shift** key: you hold it down with a letter. Now pressing the **Caps** key to insure that you are in uppercase mode.

Wherever you see an escape sequence-a sequence of characters beginning with the **escape (ESC) character**-know that this redefinition is accomplished by pressing the **ESC** key once and then pressing the appropriate letter. The **ESC** key is NOT like the **Shift** or **CTRL** key. It is like any other keyboard character. It just should be pressed once, alone by itself. Wherever you see two consecutive control characters, these have been effected by pressing and holding the **CTRL** key while pressing the two appropriate letters one at a time.

CURSOR MOVEMENTS: (if only MemoMaker had some of these...)

1: Character left **ESC D ->** (press **Return** no change)
2: Alternative Nothing **->** (press **Return** no change)
3: Character right **ESC C ->** (press **Return** no change)
4: Word left **Ctrl-A**
5: Word right **Ctrl-F**
6: Line up **ESC A ->** (press **Return** no change)
7: Line down **ESC B ->** (press **Return** no change)
8: Scroll down **ESC T**
9: Scroll up **ESC S**
10: Page up **ESC V**
11: Page down **ESC U**
12: To left of line **Ctrl-Q Ctrl-S**
13: To right of line **Ctrl-Q Ctrl-D**
14: To top of page **Ctrl-Q Ctrl-E**
15: To bott. of page **Ctrl-Q Ctrl-X**
16: To top of file **ESC h** (note lower case)
17: To end of file **ESC F**
18: To beg of block **Ctrl-Q Ctrl-B**
19: To end of block **Ctrl-Q Ctrl-K**
20: To last cursor. . . **Ctrl-Q Ctrl-P**

INSERT & DELETE

21: Insert mode on **ESC Q**
22: Insert line **ESC L**
23: Delete line **ESC M**
24: Delete EOLN **ESC K**
25: Delete rt word **Ctrl-T**
26: Del char under **ESC P**
27: Del left char **Ctrl-H**
28: Alternative Nothing **->** (press **Return** no change)

BLOCK COMMANDS

29: Mark Blk begin **Ctrl-K Ctrl-B**
30: Mark Blk end **Ctrl-K Ctrl-K**
31: Mark single word **Ctrl-K Ctrl-T**
32: Hide block **Ctrl-K Ctrl-H**
33: Copy block **Ctrl-K Ctrl-C**
34: Move block **Ctrl-K Ctrl-V**
35: Delete block **Ctrl-K Ctrl-Y**
36: Read block **Ctrl-K Ctrl-R**
37: Write block **Ctrl-K Ctrl-W**

MISC. EDITING COMMANDS:

38: End edit **Ctrl-K Ctrl-D**
39: Tab **Ctrl-I**
40: Auto Tab **Ctrl-K Ctrl-I**
41: Restore line **Ctrl-Q Ctrl-L**
42: Find **Ctrl-Q Ctrl-F**
43: Find & replace **Ctrl-Q Ctrl-A**
44: Repeat last find **Ctrl-L**
45: Ctrl char prefix **Ctrl-P**

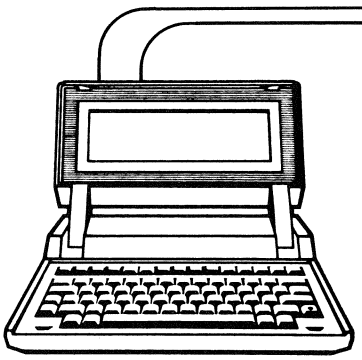
C. Once you have filled in the key redefinitions the program will double check your work. If it finds any conflicting definitions, it will let you know and tell you the approximate location of the conflict. Make any corrections that need to be made. From the main menu you can press **C** again to review your work.

V. Save Your Changes

A. When the key definitions meet your satisfaction, the program will return you to the initial Installation Menu. At this point, press Q and then press any key to return to PAM.
B. Issue the following commands from the PAM DOS command line (with your newly formatted work disk in drive C):

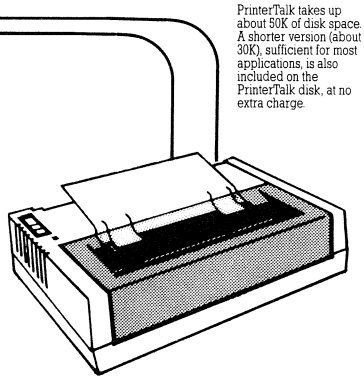
COPY TURBO.* **C:** and **Return**
(two files copied)
COPY TINST.* **C:** and **Return**
(three files copied)
DEL TINST.* and **Return**

Your HP110 is now TURBO-CHARGED with Turbo Pascal!



PrinterTalk
The MemoMaker Enhancer

It does the things you wish MemoMaker could do!



PrinterTalk takes up about 50K of disk space. A shorter version (about 30K), sufficient for most applications, is also included on the PrinterTalk disk, at no extra charge.

MemoMaker users: Now you can take advantage of *all* your printer's features, not just bold and underline. PrinterTalk Version 1.2, an easy-to-use software package from Personalized Software, prints your MemoMaker files, allowing you to:

- Change attributes (type styles) anywhere *within* the files you print—
  Bold, underline, *italic*, compressed, expanded
  (whatever your printer supports)
- Control numerous print functions, including:
  -number of copies
  -lines per inch
  -lines per page
  -spacing (including double, triple, quadruple)
  -automatic page numbering
- Avoid paper waste by preventing annoying form feeds
- Use your HP110 as an electronic typewriter
  -PrinterTalk connects your keyboard directly to your printer
  -Great for labels, envelopes, short notes, any small typing task
- Perform advanced features supported by your printer, such as superscripting and subscripting.

CUSTOMIZED FOR YOUR PRINTER

PrinterTalk stores the "escape sequences" (command codes) that tell your HP printer how to perform attributes and print functions. Escape sequences are already built into PrinterTalk for ThinkJet, LaserJet (and cartridges), and other HP printers, and you can easily customize PrinterTalk for any other printer as well.

SINGLE-KEY OPERATION

Instead of a hard-to-use, intricate series of control codes, a single labelled function key sends commands to your printer. Simple "help" screens in plain English tell you what to do, and all commands are summarized on a single sheet of paper for ready reference. The user manual is clear and concise, and includes easy-to-follow examples of all commands.

---

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P.O. Box 869, Fairfield, IA 52556

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Finish the task by installing the program in the PAM menu of applications. To do this, use your MemoMaker program and type in the lines

TURBO PASCAL
TURBO.COM

and save this with the filename PAM.MNU.

Alternatively, if you already have a PAM.MNU file, GET that file and add the two lines above to it and then restore it to the electronic disk.

Now you are ready to work with Turbo Pascal on the HP110 in the way it was meant to work.

If any reader is still gun shy of performing this installation procedure, the author will provide a correctly installed version for no charge. Send some kind of proof of purchase (eg, a receipt, a master disk) and a formatted disk along with a self addressed stamped envelope to Ed Keefe, c/o FastAid Co. 314 S.W. Logan, Ankeny, IA 50021.

[Ed-In CompuServe HP User's Forum, Steve Broshears put up another version of the installation procedure for the HP110 for those used to the HP1000 editor. Download files TCMDS.MSG, TCMDS.TXT, and TINST.DAT.]

Ordering Information: Turbo Pascal

Turbo products can be ordered from Borland International, 4585 Scotts Valley Dr., Scotts Valley, CA 95066, 800-255-8008. Order the HP150 version to get 3 1/2" disks, or the MSDOS version to get 5 1/4" disks. The IBM PC version of Turbo Pascal will not run on the HP110.

Personalized Software has made arrangements with Borland International to distribute their products. We offer *Portable Paper* subscribers a 5% discount on any Borland product. In addition, we will send a supplementary HP110-installed Turbo Pascal disk to any *Portable Paper* subscriber who orders Turbo Pascal from us.

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Book Review

The HP 110 Portable: Power to Go! by Dale Flanagan

Reviewed By Gary Goodman

The HP110 is a marvel of technical engineering. However, the documentation supplied by Hewlett Packard for this marvel is mediocre, and often too skimpy for the serious user to obtain the full benefit of the computer or its built-in software.

Dale Flanagan's book on the 110 is a welcome addition, and has the potential to pick up where HP left off. Mr. Flanagan is a good writer. He supplies interesting historical perspectives, and has a subtle sense of humor. The book is well-organized, and is easy to read and comprehend.

I said "has the potential" because the first edition of Power To Go is filled with errors. A few are vague or imprecise statements or omissions of needed detail. But others are just plain errors that a competent technical editor familiar with the HP110 should have caught.

Mr. Flanagan's book seems directed mainly to those users who would have a difficult time jumping into the manuals provided by Hewlett Packard and also need a prose-style book to start them off in the right direction. In helping these users he does a good job. Without ever opening the Lotus manual, for example, I was able to get a working knowledge of Lotus's basic capabilities right from Mr. Flanigan's book. This may be in part due to Lotus's being an excellent program, but the book got me started and kept me pointed in the right direction. On top of that it was very easy to understand.

However, the book is weak when it comes to technical detail. Those areas which are well covered in HP's own documentation are also well covered in this book. Those areas which HP muddled or left to the imagination were, for the most part, not well addressed here either. This is a shame because these are just the areas where supplemental information is really needed, and a book like this can and should fill that need.

The Terminal Emulator program is a good example. This is a program of major importance—major because of the capabilities it provides. However, Power To Go does not go into the detail needed to make more than casual (dumb terminal) use of the program. The techniques of downloading, uploading, and file capture and transfer using the Modem7 protocol are very important. HP's documentation is quite thin here and this book ignores the topic completely. There is a real need for good written material covering this topic. The lack of explanation on why and how to transfer files using the Terminal Emulator program is a major shortcoming in this book, one which I hope the author will correct in a future edition.

There are many areas in the HP110 manuals where important information is obscure or missing altogether. A good example is that no mention is made in the Terminal Emulator User's Manual that when using the built-in modem the automatic logon string works only when first entering the Terminal program. It does not work when

dialing with the Dial function key. Many users find it necessary to call HP to find out why their logon sequence doesn't work. The value of this book would be greatly increased if it capitalized on HP's weakness in this and other areas by including them in the text. I'm sure HP would gladly help Mr. Flanagan in compiling a list of areas in which users frequently have problems.

The last two chapters in the book, "Connecting the Portable to Other Computers" and "Programming the Portable's Features" are quite valuable, especially since the topics are hardly covered in the HP manuals. I would have preferred for the book to go a little further in explaining some of the terminal escape sequences which the HP manual doesn't explain at all.

In conclusion, I cannot recommend this book as long as so many technical errors remain. Assuming that the errors were corrected, then I would give this book a good recommendation for people who were not adept at reading computer manuals. I encourage Mr. Flanagan and Que Corporation to continue working on a new edition to strengthen it technically and to cover some of the topics in more depth so that it will be of value to more experienced users as well.

[Ed—I agree with Gary's assessment of the book. However, although there are many technical inaccuracies which Que Corporation should correct, I would still recommend the book to those non-technical users who are beginning to explore the HP110's various capabilities and prefer an easy-to-read prose style. At Personalized Software we give Power to Go to our non-technically oriented employees rather than handing them a manual.]

Ordering information:
Que Corporation, 7999 Knew Road, Indianapolis, IN 46250, 800-428-5331, $16.95

Through the Looking Glass

by Ed Keefe

"Through the Looking Glass" is the title of a famous Lewis Carroll book. The phrase "Through the Looking Glass" also represents, to me, the HP110. Once you get beyond the "looking-glass" display, you enter a world-of-the-mind that is as chaotic as anything that Alice would have found on her trips.

This column will attempt to do two things: bring order to those who think the HP110 computer is a thing of chaos, and bring a little more chaos to those who think the HP Portable is very orderly.

The author of this column is a fellow user, like yourself. He has had over twenty years experience working with computers, but, like yourself, he has had to go through the "chaos-order" cycle with the Hewlett Packard Portable. That "chaos-order" learning cycle is the only way to go in learning how to use the current generation of microcomputers.

Hewlett Packard has gone a long way in making the Portable computer more orderly to use with its Personal Applications Manager. PAM will keep most users out of the clutches of the Microsoft Operating System (MS-DOS). Yet, once you want to do something different: something not described in the USERS' MANUAL, you will find that the only thing to do is delve into DOS and experience the chaos.

For example, did you know that your HP110 will let you do two things at once? You may or may not have realized that your computer can print out the first part of a lengthy report while you are working on the last part of the report.

Here's how to turn the HP110 into a double-duty working wonder:

1. Start with the computer in PAM. Move the pointer to the DOS window and press **Return**. This will take you into the realm of MS-DOS. (We must go there, since the command that we will use cannot be issued from the PAM command line: a real oddity—curiouser and curiouser!) The message **EXIT to return to PAM** will appear on the screen along with the prompt containing the day, time and default drive: **[A:\]**.

2. On the same line as the prompt for date and default drive type the word **print** and follow this with the name(s) of the file(s) that you wish to print. If the files are on an external disk drive, be sure to precede the name of the file(s) with the C: designator. For example:

print c:chap1.prn c:chap2.prn chap3.prn

Leave a space between the names of each file. You can print up to ten (10) files using this built-in "print-spooler". For those of you who knew this already, you probably also

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(also runs on Portable Plus and IBM PCs)

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by Everett Kaser
Distributed exclusively by Personalized Software

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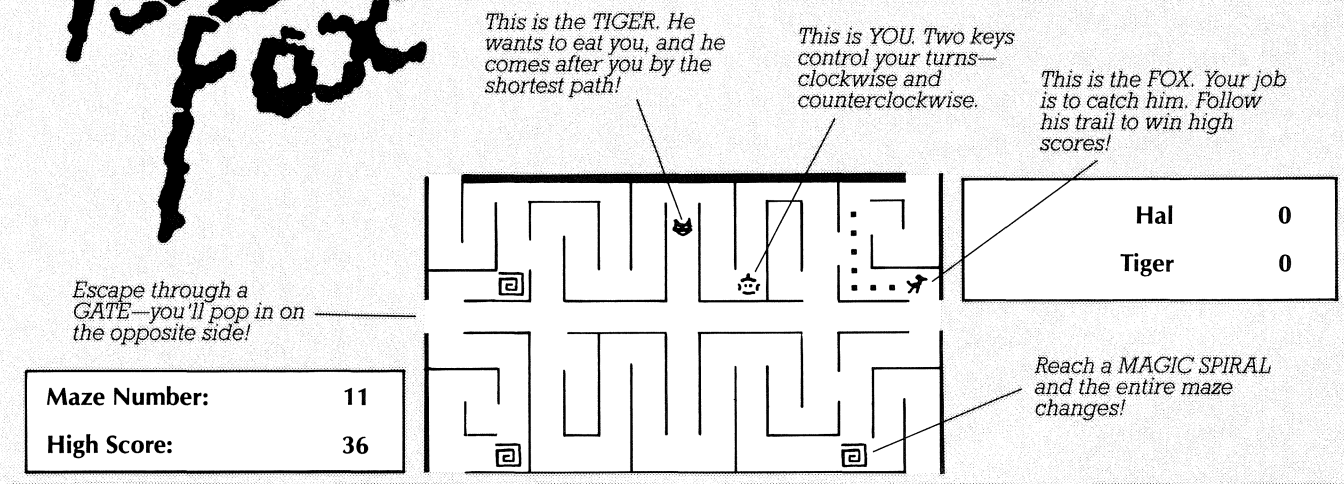
(Cliff Looyenga, Contributing Editor, *The Portable Paper*)



Tiger Fox takes up 21K of disk space

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Uh oh! The tiger's right behind me. Better stay calm. Just follow the fox's trail, gobble up those dots, and don't panic. LOOK OUT—here comes a wall! Turn left. No, not that way—left! Why didn't. . . ? Oh, yeah—the keys aren't left and right, they're clockwise and counterclockwise. I want clockwise. Quick now!

Boy, that was close. . . But yikes! Now the tiger is gaining on me! He'll catch me before I catch the fox! Looks like I'm sunk. . . Wait, there's hope! If only I can make it to that Maze Changer in time! Here goes—careful now! Turn clockwise. Clockwise again. Almost there. . . Whew—I MADE IT!!!

Now. . . where am I? There's the fox, and there's his trail. And the tiger? Pretty close, but I can always escape out that gate. And this maze has three Maze Changers. All right, Tiger, I'm ready for you this time!. . .

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PP8601

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know that you can use "wild-cards" **(* and ?)** to load a group of files into the print spooler. For example:
print chap?. *
But be careful. The computer will give you its preferred order of files to be printed. It will never be the order that you want. (This is one of Murphy's Laws.)

3. When you have the names of the files typed in, press the **Return** key and notice the prompt : **Name of lst device [PRN]:**. Be sure that your printer is connected and turned on. Then press **Return** again. Printing will start. Notice that the computer will print each file without skipping over perforations on the paper. It will do a form feed (eject a page) at the end of each file before it starts with the next file. (If you want the computer to skip over the perforations on the paper, you could have set this up in the System Config Menu in PAM.)

What has happened inside the computer can only be the work of a Mad Hatter. Think of it like this: the computer sets aside some of its internal memory, somewhat like a large tea dispenser. The PRINT program then sloshes as much of your text into this dispenser as it can and as fast as it can. Once the dispenser is full, the PRINT program then opens and shuts the spigot at the bottom of the dispenser and doles out your text to the printer, in cup-size allotments. When the printer has finished one cup of your text, it signals that it is ready for another. It will keep coming back for more until the dispenser is almost empty, at which time the program will refill the dispenser and start doling out small amounts of your text all over again.

4. Since the opening and closing of the "spigot" takes so little computing time, you can take advantage of the time between each "cup" of text to do some more work on the computer.

You can use any of the other MS-DOS commands at this time. Just realize that any commands that have to do with the disk drive will slow down or momentarily halt the printing. There will be a noticeable delay if you happen to catch the computer when it is trying to refill the "print spooling dispenser."

5. Whatever you do, do not type in **EXIT** during the time that the computer is printing out your text or you will reset the entire computer system, including the disk drive and the printer and you will have to start all over.

6. If you want to use MemoMaker, just type in the word **memomakr** when the Day Time and **[A:\]** prompt returns to the screen. (Notice the missing **E** in **memomakr**: it should be missing.)

7. The MemoMaker screen will appear in the display and you may proceed to type in new text or revise old text. If you choose to revise a document that is supposed to be printed, you may get the original rather than the revised version in your printout, unless you hurry up and replace the document before the computer starts to print it. Realize, also, that the HP110 is not truly a multi-tasking computer. It can do only one thing at a time. Thus there will be times when you will not be able to type in text. This usually happens when the computer has to get some more text from the disk drive. The computer will return control to you shortly. Spend the time thinking of what you want to type next. You may even type in some text if you don't mind typing blind. The HP110 has a small part of memory which will store your keystrokes until the computer has a chance to process them. (The computer jargon for this feature is: **typeahead**.)

If you try to use Lotus 1-2-3 while doing this background printing, the computer will stop the printing to let you run 1-2-3 and will resume only after you leave the worksheet. (To start Lotus 1-2-3 from DOS, type **123** from the **[A:\]** prompt.)

All of this information is hinted at in the USERS' MANUAL: MS-DOS section, page 37. If you want a better treatment of the material, I would recommend A Comprehensive Guide To The IBM PC by George Markowsky, Prentice-Hall, 1985.

If you have any suggestions for topics you would like to see in this column, address all correspondence to the author, care of The FastAid Co. 314 S.W. Logan, Ankeny, IA 50021; (515) 964-7064.

110% continued

Back Up Your A Disk!

No matter how experienced a computer user you are, it won't hurt to hear these words once again. **BACK UP YOUR WORK**. I know of no regular computer user, no matter how "friendly" the software, who has not managed to lose work. Whether in Lotus, Memomaker, or DOS, you can easily erase old files by copying new files to the old file names. There are countless other ways to lose hours or months of work. And for seemingly no reason at all, your HP110 can give you that stomach-knotting message that goes something to the effect of **Data Error Reading Disc A, Press Return To Reformat The A Disk.**

The easiest way to back up your files on your electronic A disk to a formatted disk in the C drive is to press **f2, File Manager** from PAM. From there press **f6, Copy File**. Typing ***.*** and **Return** on the prompt line will indicate you want to copy all files on the A drive. Simply, type **C:** for the destination file prompt. Then, check that you have a formatted disk in C with the proper connection and press **f1, Start Copy**. (You format the disk in the C drive by pressing **f5** from within file manager.) We will be discussing more sophisticated procedures for backing up and restoring your A drive in future issues.

Sharing Your Data With Your PC

Lynn Roundtree of Baton Rouge asks us, "Is it possible to equip the Portable with a 5 1/4 drive so that my desktop PC and my Portable can share the same data?"

Lynn, assuming you have an IBM or close compatible, there is a wonderful solution to your dilemma: the HP-IL Interface Card For The IBM PC. Anyone who owns an IBM PC or XT and a Portable should not be with out the HP-IL interface card. The half card fits in one of the PC's slots. You connect the PC and Portable using HP-IL cables, just

like the cables you use for the ThinkJet or HP9114. Once installed, either the PC or the Portable can be the master and the other the slave. If the Portable is the master, it can access the PC's disk drives as if they were extra Portable disk drives. The Portable can also print to the PC's printer or screen. If the PC is the master, it can access the Portable's electronic disk drive, the HP9114 or ThinkJet, and the small, sturdy 3 1/2" disk with twice the storage capability of a 5 1/4" disk makes a great backup medium for an IBM XT.

It is not difficult to install the HP-IL Interface card, or you can have your dealer do it. (Be sure the card is in tight.) The card works with some compatibles. It works with my Compaq Deskpro, and I have installed one in an AT&T 6300. Readers report that it works in the Zenith 150 and the Compaq Portable.

Be careful if you have an IBM AT with a hard disk of over 10 megabytes. If the Portable is the master and you try to copy to the AT's hard disk, you do bad things to the AT's disk directory. Any other combination using the AT and the Portable seems to work all right. If you know of other compatibles which use (or can't use) the IBM HP-IL card, tell us and we will publish an updated list.

The card, part 82973A, costs $150 and can be ordered from your HP dealer or from HP at 800-538-8787.

Anyone Know How To Address Envelopes?

Thomas Bogyo of Florence, Italy wants to know "is there any way to use the ThinkJet printer to address envelopes?" I had two thoughts: (1) Envelopes with open windows could be used. (2) You could print out addresses on ThinkJet paper and copy them onto Avery 5354 self-adhesive address labels in a copy machine. Anyone have any better ideas?

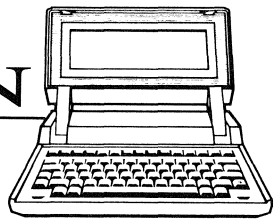
Look For HP110 Price Reductions

With the new Portable Plus, HP has an excess inventory of the original Portable. HP is offering HP110s at a special low price to its employees. Word has it that HP is discounting the HP110 to its dealers, so expect good deals on The Portable soon.

The "110 Percent" column features general tips, answers to questions, and information about how to make the most of your HP110. Please send your contributions for the column to 110 Percent, c/o Personalized Software, PO Box 869, Fairfield, IA 52556.

IBM THE CONNECTION

Running IBM Software on the HP110



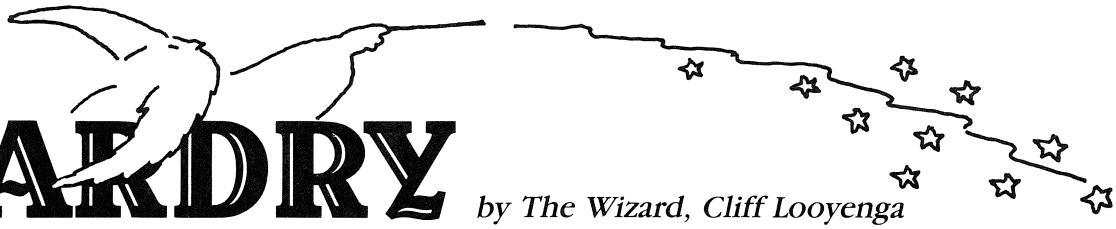
In this column we list reader's successes running IBM PC software on the HP110. Please send your successes (or non-sucesses) to The Connection, c/o Personalized Software, P.O. Box 869, Fairfield, IA 52256. Feel free to add a brief assessment of the product. Unless otherwise mentioned, we'll assume each program is available only in 5 1/4" IBM disk format requiring an IBM PC (or some of the compatibles) and the HP-IL Interface Card for the IBM PC (part number HP 82973A). See this issue's 110% for a discussion of the HP-IL Interface Card, and see the classified ads for a conversion service.

Ed Keefe of FastAid, Ankeny, IA, reports that MicroSoft EDLIN and DEBUG work on the HP110. Both programs come with the IBM PC operating system, and are available at any computer store selling IBM PCs or compatibles. EDLIN is a rudimentary editor. It is line-oriented, which means you edit one line at a time -- as opposed to a screen-oriented editor like MemoMaker, which allows you to create and modify text using the whole screen. DEBUG is for computer sophisticates who need to examine various memory locations to debug their programs or recover lost data.

Steve Cochran of Lynchburg, VA writes of two Lotus templates that work fine on the HP110. (Lotus templates are spreadsheets that are retrieved into 1-2-3. They can be simple models or complex, menu-driven, macro-controlled multifile systems.) Steve reports that "Mr. John Clements has put together a collection of templates for 1-2-3 covering statistics very well." The company: *Professional Applications Development, 12 Sandy Way, Weymouth, MA 02191, 617-331-4062*; the price: $65. We talked with Mr. Clements who said he was willing to send a 3 1/2" loaner disk with the normal 5 1/4" disk and 93-page manual. After making a copy, he asks that the 3 1/2" disk be sent back.

Steve Cochran also reports that a personal accounting Lotus template, *Personal Accounting System*, works fine. If you are a *Lotus Magazine* subscriber, the program is briefly reviewed in the July issue, page 93. The author of the program, Steve Cooper, told us that his two other Lotus templates FedTax 85 (for "what-if" tax analysis) and Personal Mailing System (for mailing labels) also work with no problem on the HP110. He did mention that the smaller screen size of the HP110 makes the templates not as visually pleasing as on his IBM PC version. The programs cost $35 each ($30 each if more than one is ordered), and come only on 5 1/4" disk. Order from *Easy As ...,36 S. Charles St., Suite 402, Baltimore, MD 21201, 301-539-5540.*

110 WIZARDRY



by The Wizard, Cliff Looyenga

Controlling the 110 Beeper

Have you ever wondered if you could play music on the HP110, or at least change the frequency of the beeper? Well you can do the latter. Changing the beeper frequency can easily be done in Turbo Pascal with the following procedure:

```
{*****************************************}
{ procedure to change the frequency of    }
{ the beeper in the HP110.                }
{*****************************************}
Procedure newfrequency(tone : byte);

{procedure to send a command to the ppu}
procedure sendppu(command : byte);
    var status: byte;
 Begin
    repeat {wait for ppu to be ready }
      status:=port[$A2] and $40;
    until status=0;
    port[$60]:=command;
 end;

Begin { main of newfrequency }

    inline($FA);      { disable interrupts }
    sendppu($61);       { write enable }
    sendppu($12);       { address within ppu}
    sendppu(tone);      { write new frequency}
    sendppu($7F);       { end of command }
    inline($FB);        { enable interrupts }

end;
```

When calling this procedure, specify a value between 1 and 255 where 1 is the highest tone that the HP110 can generate and 255 is the lowest. Once this call is complete, any time a beep is done (example: printing an ascii 7), it will beep at the new frequency. This will stay in effect until you get back into PAM; PAM nicely resets everything.

Spread The Word

If you think this newsletter is valuable, help us spread the word. Despite the tremendous reponse from people like you, at most only 10% of HP110 owners have heard of us. Mail us the names of HP110 users, and we will send them our literature. Meanwhile give them copies of *The Portable Paper* order form. Help us help them. And be sure to send us your comments so we can help you better too.

Unfortunately there is no way to control the duration of the beep, which is why you can't play music on the Portable. The duration isn't real time either; it's based on the number of cycles. What this means is that a low frequency beep will beep for a much longer time than a high frequency beep.

An Undocumented Escape Sequence

You can change the cursor from a line cursor to a box and vice versa. Just use the following escape sequence:

Line cursor = **<ESC>*dL**
Box cursor = **<ESC>*dK**

The Wizard Responds

Q I have three questions about the Terminal program. First, the HP Owner's Manual is not clear about the relationship of the settings in the PAM datacom configuration menu and the equivalent settings in the Terminal configuration menu. It appears that the Terminal Emulator does not use the settings in the Datacom Configuration menu when the Terminal Configuration menu is set to Modem.

A You're right. The Terminal program sets up the configuration according to what is set in the Terminal configuration menu and not what the PAM datacom configuration is set to. It sends configuration commands

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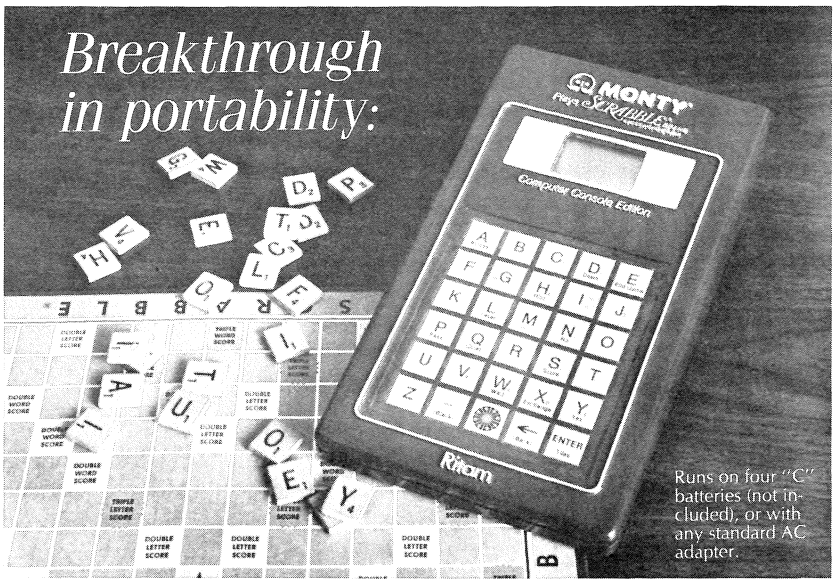

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IBM PC USERS

If you prefer, MONTY will come and play on your IBM PC – any configuration, including color. The 5¼" disk is copy-protected and comes with its own lucid instruction booklet. The rules and play are the same as on the portable console version.

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PP8601

directly to the UART, overriding the previous configuration sent to it by PAM.

Q Second, the Terminal Emulator User's Manual 1-18 mentions that it's possible to leave the Terminal Emulator program without breaking your connection to the host computer. However, every time I press **exit to main** (from the Terminal main menu), the modem hangs up the phone. What is the correct technique?

A This is a known bug in the Terminal Emulator. Even if you go from **connected** to the main menu, the Terminal program will hang up the phone. There is no workaround for this. Note, however, that this applies only to the built in-modem and not for a modem connected to the HP110 via the RS232 port.

Q And third, how do I use the Terminal Emulator's implementation of the modem 7 protocol to transfer files with another computer, such as an IBM-PC using Smartcom or Crosstalk, or with another HP110. These programs all seem to need operator action on each end. The Terminal Emulator program cannot command these programs to start transmitting or receiving files.
Gary Goodman, Fredericksburg, VA

A It is true that the HP110 cannot initiate any transfer of files without operator action. I've even tried redirecting the input to the Terminal program from a file, but that didn't work either. You can transfer files with another HP110 over the phone, but an operator will have to be present on both machines. Once the configuration is set, the sender presses **to host** and the receiver presses **from host**. The exact steps of how to use the built-in XMODEM are described in the manual starting on page 1-20.

Q In the HP User's Guide, Appendix C, page C-6, there is a section entitled: "Keyboard Reassignment". I couldn't do anything of what's said there. If you know how to do it, please tell me.
Denis Asselin, Maharishi International University, Fairfield, Iowa

A I'm glad you asked that; I remember reading about that myself, but never had the time to try it out. The manual you refer to is the *Series 100 Users Guide* that comes with the *Programmers Tool Kit*. I tried it from Turbo Pascal, and it didn't work. Upon further investigation I found out that the escape codes to reassign the keyboard were never actually implemented, and there is no work around.

Cliff Looyenga provides technical support for HP PCs and HP3000's, and in those circles he is known as "The Wizard". He owns an HP110 that he uses to develop utilities, many of which are available on the CompuServe HP Series 100 User's Forum.

The Wizard will be happy to respond to your technical questions. Write to: The Wizard, c/o Personalized Software, PO Box 869, Fairfield, IA 52556.

HP110 USER GROUPS

Thanks to so many of you who are willing to help organize local users groups. Users groups give an opportunity to share tips, answer questions, discuss other products, trade free software and Lotus templates, and meet other professionals.

As you will notice some areas have more than one contact person and some major areas have none. If you are in a "missing" area and would like to organize a group, contact us. If your groups combine also tell us. We will publish this column each issue, keeping it up to date. Write *Local Users Groups, Box 869, Fairfield, IA, 515-472-6330.*

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Southern California
Beginning 1/86 meetings at HP's new North Hollywood Sales Office, 2nd or 3rd Thur. Call for time, date and request LA Scrug Notes Newsletter. Dave Mark, 818-794-4969.

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Interested in forming HP110 local users group. Call during day. Blue Chip Computer System. 9701 West Pico Blvd, Los Angeles. Elmar M. Gomez 213-553-3393.

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Please contact me if interested in forming users group.
Stephen L. Eyre. 454-0555.

San Mateo, Santa Clara Counties In San Francisco Bay Area
Call if interested. Time and place to be arranged. Herbert L. Hamerslough. D: 415-340-8811. E: 415-323-9618.

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609 Rosita Ave. Los Altos, CA 94022. 1st Tue night, 8PM, monthly or bi-monthly. Please, call to verify time and place and to say, hello. Marge Sutton. D: 415-949-0509. E: 415-948-0627.

Colorado

Colorado Springs
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Iowa

Mid Iowa
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Southeast Iowa
906 W. Briggs, Fairfield, IA 52556. Call Hal Goldstein 515-472-6330.

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If you are interested in developing a Charlotte area HP-110 user group, please call my phone answerer and leave your name, phone number, address, and the fact that you are interested in a 110 user group. John Jacob, 704-334-3468.

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Houston

Houston area users, please call and let me know what interests you. I will arrange a meeting as soon as I know what is needed. Our abilities are enhanced by sharing resources. Thomas R. Page,
D: 713-759-4259, E: 713-528-7138.

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